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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,599	02/27/2002	Tae-Sik Yun	678-743 (P9726)	7084

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08/12/2004

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EXAMINER
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CHIANG, JACK

ART UNIT	PAPER NUMBER
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2642

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/085,599

Applicant(s)

YUN, TAE-SIK

Examiner

Jack Chiang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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### CLAIMS

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Helms (US 5561710) in view of Mauney et al. (US 5812659).

Regarding claim 1, Helms shows a detachable keypad (10) comprising:

A jack (for 18);

A key array (14);

A DTMF generator (36);

When a key (14) is pressed while an plug (18) is inserted into the jack, a DTMF signal is generated by the DTMF generator (36) corresponding to the pressed key and is transmitted to a microphone (24) of a mobile phone through a speaker (22).

Helms differs from the claimed invention in that it does not refer the jack (for 18) and the speaker (22) as an earphone-microphone jack and speaker respectively. However, it is commonly seen that speakers come with the form of an earphone-microphone speaker. This is shown by Mauney, such as the earphone-microphone speaker (fig. 2 in Mauney).

Hence, the concept of using such speaker is well taught by Helms, it would have been obvious for one of ordinary skill in the art to use Helms' speaker as it is, or

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to replace Helms' speaker with Mauney's earphone-microphone speaker, because it is commonly seen that speakers come with a single speaker as shown by Helms, or with an earphone-microphone speaker shown by Mauney, this simply can be considered as an intended use of Mauney, and replacing the type of speaker in Helms would not change the basic concept of transmitting the DTMF tone from the keypad to the handset as taught by Helms.

Regarding claim 2, Helms shows a phone (10) comprising:

A microphone (24);

A speaker fixing portion (23) for fixing a speaker (22);

An audio/DTMF separator and a controller for analyzing the DTMF signal (in 44).

Helms differs from the claimed invention in that it does not refer the jack (for 18) and the speaker (22) as an earphone-microphone jack and speaker respectively.

However, it is commonly seen that speakers come with the form of an earphone-microphone speaker. This is shown by Mauney, such as the earphone-microphone speaker (fig. 2 in Mauney).

Hence, the concept of using such speaker is well taught by Helms, it would have been obvious for one of ordinary skill in the art to use Helms' speaker as it is, or to replace Helms' speaker with Mauney's earphone-microphone speaker, because it is commonly seen that speakers come with a single speaker as shown by Helms, or with an earphone-microphone speaker shown by Mauney, this simply can be considered as an intended use of Mauney, and replacing the type

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of speaker in Helms would not change the basic concept of transmitting the DTMF tone from the keypad to the handset as taught by Helms.

Regarding claim <sup>5</sup>/<sub>3</sub>, Helms shows a detachable keypad (10) comprising:

A jack (for 18);

A plug (18);

A key array (14);

A key press sensor (from 32);

A DTMF generator (36);

A controller (32) for controlling the DTMF generator (36) corresponding to the pressed key and is transmitted to a microphone (24) of a mobile phone through a speaker (22) while the plug (18) is inserted in the jack.

Helms differs from the claimed invention in that it does not refer the jack (for 18) and the speaker (22) as an earphone-microphone jack and speaker respectively. However, it is commonly seen that speakers come with the form of an earphone-microphone speaker. This is shown by Mauney, such as the earphone-microphone speaker (fig. 2 in Mauney).

Hence, the concept of using such speaker is well taught by Helms, it would have been obvious for one of ordinary skill in the art to use Helms' speaker as it is, or to replace Helms' speaker with Mauney's earphone-microphone speaker, because it is commonly seen that speakers come with a single speaker as shown by Helms, or with an earphone-microphone speaker shown by Mauney, this simply can be considered as an intended use of Mauney, and replacing the type

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of speaker in Helms would not change the basic concept of transmitting the DTMF tone from the keypad to the handset as taught by Helms.

Helms further differs from the claimed invention in that it does not explicitly mention a sensor for checking whether or not the plug (81) is inserted into the jack.

However, it is understood and inherent that when the plug (18) is inserted into the communication terminal (10), the plug (18) has contacts which sends a connection signal to the sensor in the terminal (10). This is also taught by Mauney, such as the plug (TIP, RING, J2-1, J2-2 etc. in fig. 12) which would provide a sensed signal to determined whether or not the plug is inserted into the jack. If it is found that Holms does not have such sensing feature, it would have been obvious for one of ordinary skilled in the art to adapt Mauney's method in Holms when plugging two devices together. This has been done conventional in such devices and would have been obvious for one of ordinary skill in the art.

Regarding claim 7, Helms shows a phone (10) comprising:

A microphone (24);

A speaker fixing portion (23) for fixing a speaker (22);

An audio/DTMF separator and a controller for analyzing the DTMF signal (in 44).

A detachable keypad (10);

A jack (for 18);

A key array (14);

A DTMF generator (36);

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When a key (14) is pressed while an plug (18) is inserted into the jack, a DTMF signal is generated by the DTMF generator (36) corresponding to the pressed key and is transmitted to a microphone (24) of a mobile phone through a speaker (22).

Helms differs from the claimed invention in that it does not refer the jack (for 18) and the speaker (22) as an earphone-microphone jack and speaker respectively. However, it is commonly seen that speakers come with the form of an earphone-microphone speaker. This is shown by Mauney, such as the earphone-microphone speaker (fig. 2 in Mauney).

Hence, the concept of using such speaker is well taught by Helms, it would have been obvious for one of ordinary skill in the art to use Helms' speaker as it is, or to replace Helms' speaker with Mauney's earphone-microphone speaker, because it is commonly seen that speakers come with a single speaker as shown by Helms, or with an earphone-microphone speaker shown by Mauney, this simply can be considered as an intended use of Mauney, and replacing the type of speaker in Helms would not change the basic concept of transmitting the DTMF tone from the keypad to the handset as taught by Helms.

Regarding claim 3, the combination of Holms and Mauney shows:

A display (12);

The controller (32);

The DTMF signals (36).

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3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Helms and Mauney et al. in view of Won (US 6149116).

Regarding claim 4, the combination of Helms shows a fixing portion (23).

The combination of Helm differs from the claimed invention in the fixing portion is a strap instead of a magnet.

However, Won teaches providing a magnet (2) as a fixing portion.

Hence, the concept of providing a fixing portion is well taught by the combination of Helms. It would have been obvious for one of ordinary skill in the art to modify the combination of Helms with a magnet with the teaching of Won, because it is commonly seen that magnet is used as a holding means, and the modification of Helms by replacing Helms' strap with a magnet would not change the basic concept of holding the speaker as taught by Helms.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Helms and Mauney et al. in view of McAvoy et al. (US 3757048).

Regarding claim 6, the combination of Helms shows the amplifier (such as 38 in Helms).

The combination of Helms differs from the claimed invention in that it does not have a volume control.

However, McAvoy teaches providing a volume control for a speaker amplifier (see 130, 132).

Hence, it would have been obvious for one of ordinary skill in the art to modify the combination of Helms with a volume control as taught by McAvoy, this is



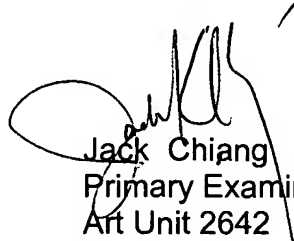
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commonly done in sound processing when it involves speaker which is usually required to control the audio output level of the speaker (col. 3, lines 30-33 in McAvoy).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack Chiang whose telephone number is 703-305-4728. The examiner can normally be reached on Mon.-Fri. from 8:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar, can be reached on 703-305-4731. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jack Chiang  
Primary Examiner  
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